# Commonwealth of Kentucky Energy and Environment Cabinet Department for Environmental Protection Division for Air Quality 200 Fair Oaks Lane, 1<sup>st</sup> Floor Frankfort, Kentucky 40601

(502) 564-3999

# AIR QUALITY PERMIT Issued under 401 KAR 52:040

Permittee Name: Commonwealth Agri-Energy, LLC

Mailing Address: 4895 Pembroke Road

Hopkinsville, Kentucky 42241

Source Name: Commonwealth Agri-Energy, LLC

Mailing Address: Same as above

Source Location: 4895 Pembroke Road

Hopkinsville, Kentucky 42241

Permit Number: S-08-106 Source A. I. #: 46425

**Activity #: APE20080002** 

**Review Type:** Construction/Operating

Source ID #: 21-047-00112

**Regional Office:** Paducah Regional Office

4500 Clarks River Road Paducah, KY 42003-0823

(270) 898-8468

**County:** Christian

**Application** 

Complete Date: August 29, 2008 Issuance Date: November 7, 2008

**Revision Date:** N/A

**Expiration Date:** November 7, 2018

John S. Lyons, Director Division for Air Quality **Permit Number:** <u>S-08-106</u> **Page:** <u>1</u> **of** <u>29</u>

# **SECTION A - PERMIT AUTHORIZATION**

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:040, State-origin permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining other permits, licenses, or approvals that may be required by the Cabinet or other federal, state, or local agencies.

**Permit Number:** <u>S-08-106</u> **Page:** <u>2</u> **of** <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

#### **GRAIN HANDLING AND MILLING:**

01 (-) Corn Day Bin #1

(Maximum Process Rate – 420 tons/hour) (From Elevator Leg to Hammermill Feed)

Constructed: 2003

Control: Milling Baghouse (Reverse-Air)

(Model: CAMCORP 10SWF152)

(-) Hammermill Feed (Internal Handling)

(Maximum Process Rate – 420 tons/hour)

(From Corn Day Bins #1, #2, & #3 to Grain Hammermills #1, #2 & #3)

Constructed: 2003

Control: Milling Baghouse (Reverse-Air)

(Model: CAMCORP 10SWF152)

(P30) Grain Hammermill #1

(Maximum Process Rate – 420 tons/hour)

(From Hammermill Feed to Milling Baghouse)

Constructed: 2003

Control: Milling Baghouse (Reverse-Air)

(Model: CAMCORP 10SWF152)

(C30) Milling Baghouse

(Model: CAMCORP 10SWF152)

(From Corn Day Bins #1, #2, & #3; Hammermill Feed; and Grain Hammermills #1, #2, & #3 to Fermentation & Distillation Operations

Mixer)

Constructed: 2003

#### DDGS DRYING AND HANDLING OPERATIONS:

03 (P70) DDGS Transfer System Baghouse

(Model: CAMCORP 12SWF368/331) (From DDGS Drver to DDG Storage)

Constructed: 2003

(-) DDG Storage

(Maximum Process rate – 13.6 tons/hour)

(From DDG Loadout System Baghouse and DDG Transfer System

**Baghouse to Truck / Railcar Loadout)** 

Constructed: 2003

Control: DDGS Transfer System Baghouse (Reverse-Air)

(Model: CAMCORP 12SWF368/331)

**Permit Number:** <u>S-08-106</u> **Page:** <u>3</u> **of** <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

#### **DDGS DRYING AND HANDLING OPERATIONS: (CONTINUED)**

03 (P20) Truck Loadout

(Maximum Process rate – 13.6 tons/hour)

(From DDG Storage)

Constructed: 2003

Control: DDGS Loadout System Baghouse (Reverse-Air)

(Model: CAMCORP 10SWF48/40)

(P20) Railcar Loadout

(Maximum Process rate – 13.6 tons/hour)

(From DDG Storage)

Constructed: 2003

Control: DDGS Loadout System Baghouse (Reverse-Air)

(Model: CAMCORP 10SWF48/40)

(P70) DDGS Loading Baghouse

(Model: CAMCORP 10SWF48/40)

(From Truck and Railcar Loadouts to DDG Storage)

Constructed: 2003

### **Grain Handling and Milling:**

11 (-) Corn Day Bin #2

(Maximum Process Rate – 420 tons/hour) (From Elevator Leg to Hammermill Feed)

Constructed: 2005

Control: Milling Baghouse (Reverse-Air)

(Model: CAMCORP 10SWF152)

(-) Corn Day Bin #3

(Maximum Process Rate – 420 tons/hour) (From Elevator Leg to Hammermill Feed)

Constructed: 2005

Control: Milling Baghouse (Reverse-Air)

(Model: CAMCORP 10SWF152)

(-) Grain Hammermill #2

(Maximum Process Rate – 420 tons/hour)

(From Hammermill Feed to Milling Baghouse)

Constructed: 2005

Control: Milling Baghouse (Reverse-Air)

(Model: CAMCORP 10SWF152)

**Permit Number:** <u>S-08-106</u> **Page:** <u>4</u> **of** <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

### **Grain Handling and Milling: (Continued)**

11 (-) Grain Hammermill #3

(Maximum Process Rate – 420 tons/hour) (From Hammermill Feed to Milling Baghouse)

Constructed: 2005

Control: Milling Baghouse (Reverse-Air)

(Model: CAMCORP 10SWF152)

### **APPLICABLE REGULATIONS:**

State Regulation 401 KAR 59:010, New process operations, which applies to each of the affected facilities listed above.

#### 1. **Operating Limitations:**

N/A

#### 2. Emission Limitations:

The Division for Air Quality has determined that this facility's potential to emit any air pollutant is less than 100 tons per year. Therefore, although the permit is conditioned to allow emissions in excess of 100 tons per year pursuant to federally enforceable Regulation KAR 59:010, New process operations, emissions equal to or in excess of 100 tons per year of any pollutant are not possible. Accordingly, this permit is being issued as a minor source state-origin permit.

a. Pursuant to Regulation 401 KAR 59:010, Section 3(2), the emissions of particulate matter for each respective emission point shall not exceed the allowable rate limit as calculated by one of the following equations using the process weight rate (in units of tons/hr).

For process rates up to 60,000 lbs/hr:  $E = 3.59P^{0.62}$ 

For process rates in excess of 60,000 lbs/hr:  $E = 17.31P^{0.16}$ 

For the equation, E = rate of emission in lb/hr and P = process weight rate in tons/hr

- 1) Combined emissions of particulate matter from the three Corn Day Bins [Emission Points 01 (-) and 11 (-)] shall not exceed 45.50 lbs/hr, each.
- 2) Combined emissions of particulate matter from the Hammermill Feed [Emission Point 01 (-)] shall not exceed 45.50 lbs/hr.

**Permit Number:** <u>S-08-106</u> **Page:** <u>5</u> **of** <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

### 2. <u>Emission Limitations</u>: (Continued)

- a. 3) Combined emissions of particulate matter from the three Grain Hammermills [Emission Points 01 (P30) and 11 (-)] shall not exceed 45.50 lbs/hr, each.
  - 4) Combined emissions of particulate matter from the DDG Storage [Emission Point 03 (-)] shall not exceed 18.11 lbs/hr.
  - 5) Combined emissions of particulate matter from the Truck Loadout [Emission Point 03 (P20)] shall not exceed 18.11 lbs/hr.
  - 6) Combined emissions of particulate matter from the Railcar Loadout [Emission Point 03 (P20)] shall not exceed 18.11 lbs/hr.
- b. Pursuant to Regulation 401 KAR 59:010, Section 3(1), opacity of visible emissions from each affected facility (Emission Points 01, 03, and 11) shall not exceed twenty percent (20%).

### Compliance Demonstration Method:

a. Compliance with hourly emission limit shall be determined as follows:

Hourly Emission Rate = [Monthly processing rate x Emission Factor as determined from AP-42 \* / (Hours of operation per month)] x (1 - control efficiency)

- \* If an Emission Factor other than that taken from AP-42 is used, documentation on how that Emission Factor was derived must be submitted to the Division's Central Office for approval.
- b. In determining initial compliance with the opacity standards as listed above, the owner or operator shall use Reference Method 9, as directed by 401 KAR 59:010, Section 4.
- c. In demonstrating subsequent annual compliance with the specified opacity limitations listed above, as required by Cabinet Provisions and Procedures for Issuing State-Origin Permits, Section 1c (Material incorporated by reference in 401 KAR 52:040, State-Origin Permits, Section 23), and/or upon request by the Division, the owner or operator shall use Reference Method 9, as directed by 401 KAR 59:010, Section 4.
- d. As required by Section 1b of the Cabinet Provisions and Procedures for Issuing State-Origin Permits, compliance with annual emissions and processing limitations shall be based on emissions and processing rates for any twelve (12) consecutive months.

#### 3. <u>Testing Requirements</u>:

**Permit Number:** <u>S-08-106</u> **Page:** <u>6</u> **of** <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

### 4. **Monitoring Requirements:**

See Section C, General Condition 6.a.

# 5. Recordkeeping Requirements:

- a. The permittee shall maintain records of the following information for the baghouses:
  - 1) The design and/or manufacturer's specifications.
  - 2) The operational procedures and preventative maintenance records.
  - 3) Daily records of the pressure drop across the baghouse during all periods of operation.
  - 4) During all periods of startup, shutdown, or malfunction of the baghouse, a daily (calendar day) log shall be kept of whether any air emissions were visible from the stack associated with the baghouse.
- b. See Section C, General Conditions 2.a., 2.b., and 6.a.

#### 6. Reporting Requirements:

- a. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days after completion of the fieldwork.
- b. See Section C, General Conditions 3.a., 3.b., 3.c., and 6.b.

**Permit Number:** <u>S-08-106</u> **Page:** <u>7</u> **of** <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

#### **FERMENTATION & DISTILLATION OPERATIONS:**

**O2** (P40) Fermentation Process

Constructed: 2003

Control: CO<sub>2</sub> Scrubber

(P50) Distillation Process

Constructed: 2003

Control: Process Blower

#### **DDGS DRYING AND HANDLING OPERATIONS:**

04 (P10) DDGS Dryer A (Natural Gas-Fired - 40 mmBTU/hr)

(Maximum Process rate – 13.6 tons/hour)

(From 3 Centrifuges, 5 Evaporators, and Biomethanator to Thermal

Oxidizer and DDGS Transfer System Baghouse)

Constructed: 2003

Control: DDGS Transfer System Baghouse (Reverse-Air)

(Model: CAMCORP 12SWF368/331)

Thermal Oxidizer

#### ADDITIONS TO THE SOURCE

#### STEAM-GENERATING THERMAL OXIDIZER:

05 (C10) Thermal Oxidizer

Natural Gas-Fired (90.0 mmBTU/hr)

(From Mixer, Slurry Tank, Yeast Tank, 190 Proof Condenser, and

**DDGS Dryer**)

Constructed: 2008

#### **DDGS DRYING AND HANDLING OPERATIONS:**

13 (P10) DDGS Dryer B (Natural Gas-Fired - 40 mmBTU/hr)

(Maximum Process rate – 13.6 tons/hour) [To Regenerative Thermal Oxidizer (RTO)]

Constructed: 2008

Control: Regenerative Thermal Oxidizer (RTO)

**Permit Number:** <u>S-08-106</u> **Page:** <u>8</u> **of** <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

#### **APPLICABLE REGULATIONS:**

State Regulation 401 KAR 59:015, New indirect heat exchangers, which applies to the two DDGS Dryers [Emission Points 04 (P10) and 13 (P10)], and the Thermal Oxidizer [Emission Point 05 (C10)]

State Regulation 401 KAR 63:020, Potentially hazardous matter or toxic substances, which applies to the fermentation process [Emission Point 02 (P40), the distillation process, [Emission Point 02 (P50)], to the two DDGS Dryers [Emission Points 04 (P10) and 13 (P10)], and the Thermal Oxidizer [Emission Point 05 (C10)]

State Regulation 401 KAR 60:005, Standards of performance for new stationary sources, which incorporates by reference 40 CFR 60.40c (40 CFR 60, Subpart Dc), applies to the Thermal Oxidizer [Emission Point 05 (C10)]

# 1. **Operating Limitations:**

Pursuant to State Regulation 401 63:020, Potentially hazardous matter or toxic substances, persons responsible for a source from which hazardous matter or toxic substances may be emitted shall provide the utmost care and consideration, in the handling of these materials, to the potentially harmful effects of the emissions resulting from such activities.

#### 2. <u>Emission Limitations</u>:

- a. Pursuant to State Regulation 401 KAR 59:015, Section 4(1)(c), combined emissions of particulate matter from the indirect heat exchangers shall not exceed 0.285 lbs/mmBTU actual heat input.
- b. Pursuant to State Regulation 401 KAR 59:015, Section 4(2), the opacity of visible emissions from the combustion of natural gas shall not exceed twenty (20) percent except that a maximum of forty (40) percent opacity shall be permissible for not more than six (6) consecutive minutes during cleaning the fire box or blowing soot.
- c. Pursuant to State Regulation 401 KAR 59:015, Section 5(1)(c)1., combined emissions of sulfur dioxide from the indirect heat exchangers shall not exceed 0.923 lbs/mmBTU actual heat input.
- d. Pursuant to State Regulation 401 63:020, no owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to harmful to the health and welfare of humans, animals, and plants.
- e. Pursuant to 401 KAR 50:055, Section 2(5), the permittee shall operate the thermal oxidizers at all times the DDGS dryers are operating.

**Permit Number:** <u>S-08-106</u> **Page:** <u>9</u> **of** <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

#### 2. <u>Emission Limitations</u>: (Continued)

#### Compliance Demonstration Method:

a. Compliance with the particulate matter emission limit for the indirect heat exchangers shall be determined as follows:

Emission Rate (lbs/mmBTU) = 
$$0.9634 * X^{-0.2356}$$

For the equation X = the total heat input capacity (in mmBTU/hour)

- b. In determining initial compliance with the opacity standards as listed above, the owner or operator shall use Reference Method 9, as directed by 401 KAR 59:015, Section 8.
- c. In demonstrating subsequent annual compliance with the specified opacity limitations listed above, as required by Cabinet Provisions and Procedures for Issuing State-Origin Permits, Section 1c (Material incorporated by reference in 401 KAR 52:040, State-Origin Permits, Section 23), and/or upon request by the Division, the owner or operator shall use Reference Method 9, as directed by 401 KAR 59:015, Section 8.
- d. Compliance with the sulfur dioxide emission limit for the indirect heat exchangers shall be determined as follows:

Emission Rate (lbs/mmBTU) = 
$$7.7223 * X^{-0.4106}$$

For the equation X = the total heat input capacity (in mmBTU/hour)

e. As required by Section 1b of the Cabinet Provisions and Procedures for Issuing State-Origin Permits, compliance with annual emissions and processing limitations shall be based on emissions and processing rates for any twelve (12) consecutive months.

#### 3. Testing Requirements:

Pursuant to 401 KAR 59:015, Section 8:

- a. The reference methods in Appendix A of 40 CFR 60 except as provided in 401 KAR 50:045 shall be used to determine compliance with the standards as prescribed in 401 KAR 59:015, Sections 4 and 5 as follows:
  - 1) Reference Method 1 for the selection of sampling site and sample traverses;
  - 2) Reference Method 3 for gas analysis to be used when applying Reference Methods 5 and 6:
  - 3) Reference Method 5 for the concentration of particulate matter and the associated moisture content;
  - 4) Reference Method 6 for the concentration of sulfur dioxide;
  - 5) Reference Method 9 for visible emissions;

Permit Number: <u>S-08-106</u> Page: <u>10</u> of <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

### 3. <u>Testing Requirements</u>: (Continued)

- b. For Reference Method 5, Reference Method 1 shall be used to select the sampling site and the number of traverse sampling points. The sampling time for each run shall be at least sixty (60) minutes and the minimum sampling volume shall be 0.85 dscm [thirty (30) dscf] except that smaller sampling times or volumes, when necessitated by process variables or other factors, may be approved by the Cabinet. The probe and filter holder heating systems in the sampling train shall be set to provide a gas temperature no greater than 160 degrees Centigrade (320 degrees Fahrenheit).
- c. For Reference Method 6, the sampling site shall be the same as that selected for Reference Method 5. The sampling point in the duct shall be at the centroid of the cross section or at a point no closer o the walls than one (1) m (3.28 ft). The sample shall be extracted at a rate proportional to the gas velocity at the sampling point.
- d. For Reference Method 6, the minimum sampling time shall be twenty (20) minutes and the minimum sampling volume shall be 0.02 dscm (0.71 dscf) for each sample. The arithmetic mean of two (2) samples shall constitute one (1) run. Samples shall be taken at approximately thirty (30) minute intervals.
- e. The permittee shall use the data collected during the performance test(s) to calculate and record the average combustion temperature of the dryer. This average combustion temperature is the minimum operating set point of the thermal oxidizer.
- f. See Section C, General Condition 7.c.

#### 4. **Monitoring Requirements:**

- a. The permittee shall install, calibrate, maintain, and operate in accordance with manufacturer's specifications a temperature monitoring device in the firebox of the thermal oxidizer or in the duct immediately downstream of the firebox before any substantial heat exchange occurs. The temperature monitoring device:
  - 1) Shall be equipped with a continuous recording device.
  - 2) Shall have an accuracy of the greater of 0.75 percent of the temperature measurement expressed in degrees Celsius or  $\pm$  2.5°C.

#### b. The permittee shall:

1) Before using the sensor for the first time, or when relocating or replacing the sensor, perform a validation check by comparing the sensor output to a calibrated temperature measurement device or by comparing the sensor output to a simulated temperature.

Permit Number: <u>S-08-106</u> Page: <u>11</u> of <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

# 4. <u>Monitoring Requirements</u>: (Continued)

- b. 2) Perform an electronic calibration at least semi-annually. Following the electronic calibration, conduct a temperature sensor validation check in which a second or redundant temperature sensor placed nearby the process temperature sensor must yield a reading within 30 degrees Fahrenheit of the process temperature sensor reading.
  - Conduct calibration and validation checks any time the sensor xceeds the manufacturer's specified maximum operating temperature range or install a new temperature sensor.
  - 4) At least monthly, inspect components for integrity and electrical connections for continuity, oxidation, and galvanic corrosion.
- c. The permittee must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs. Compliance shall be demonstrated by monitoring and recording the combustion temperature continuously. Continuously parameter monitoring shall be a minimum of recording the measured value at least once every 15 minutes.
- d. See Section C, General Condition 6.a.

#### 5. Recordkeeping Requirements:

- a. The permittee shall maintain records of the following information for the baghouses:
  - 1) The design and/or manufacturer's specifications;
  - 2) The operational procedures and preventative maintenance records;
  - 3) Daily records of the pressure drop across the baghouse during all periods of operation;
  - 4) During all periods of startup, shutdown, or malfunction of the baghouse, a daily (calendar day) log shall be kept of whether any air emissions were visible from the stack associated with the baghouse.
- b. The permittee shall maintain records of the following information for the thermal oxidizer:
  - 1) The design and/or manufacturer's specifications;
  - 2) The operational procedures and preventative maintenance records;
  - 3) The calibration records for the combustion temperature sensor, validation checks, and the subsequent accuracy audits;
  - 4) A log of visual inspections of each temperature sensor if redundant temperature sensors are not used;
  - 5) A record of the average combustion chamber temperature limit established during the most recent performance test and all relevant supporting data;
  - 6) The continuous recording of the combustion chamber temperature;

Permit Number: <u>S-08-106</u> Page: <u>12</u> of <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

### 5. Recordkeeping Requirements: (Continued)

- b. 7) All periods (during DDGS dryer operation) during which the combustion chamber temperature is more than 28 degrees Celsius (50 degrees Fahrenheit) below the average combustion chamber temperature of the thermal oxidizer during the most recent performance test which demonstrated compliance. Each occurrence shall be considered a deviation from permit requirements.
  - 8) Pursuant to 40 CFR 60, Subpart Dc, Section 60.48c(g)(2), the permittee shall record the amount of natural gas combusted in the thermal oxidizer each month.
- c. During all periods of operation of the thermal oxidizer in which the combustion chamber temperature of the thermal oxidizer is more than 28 degrees Celsius (50 degrees Fahrenheit) below the average combustion chamber temperature of the thermal oxidizer during the most recent performance test which demonstrated compliance, or other malfunction of the thermal oxidizer, a daily log of the following shall be kept:
  - 1) Whether any emissions were visible from the facilities associated with the thermal oxidizer;
  - 2) Whether visible emissions were normal for the process;
  - 3) The cause of the visible emissions;
  - 4) Corrective action(s) taken.
- d. A control efficiency of 0% shall be assumed for all periods of operation the thermal oxidizer is receiving emissions with the combustion chamber temperature more than 28 degrees Celsius (50 degrees Fahrenheit) below the average combustion chamber temperature of the thermal oxidizer during the most recent performance test.
- e. See Section C, General Conditions 2.a., 2.b., and 6.a.

#### 6. Reporting Requirements:

- a. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days after completion of the fieldwork.
- b. A written report shall be submitted to the Division's Paducah Regional Office of each instance during which the average temperature of the thermal oxidizer falls more than 28 degrees Celsius (50 degrees Fahrenheit) below
- c. See Section C, General Conditions 3.a., 3.b., 3.c., and 6.b.

Permit Number: <u>S-08-106</u> Page: <u>13</u> of <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

#### **GRAIN TERMINAL**

06 (-) Haul Road and Yard Area (Paved)

Control: Wet Suppression

# **APPLICABLE REGULATIONS:**

State Regulation 401 KAR 63:010, Fugitive Emissions, applies to the affected facility listed above.

### 1. **Operating Limitations**:

N/A

### 2. <u>Emission Limitations</u>:

- a. The materials processed at the affected facility listed above shall be controlled with wet suppression, enclosures, and/or dust collection equipment so as to comply with the requirements specified in Regulation 401 KAR 63:010, Fugitive emissions, Section 3. Standards for fugitive emissions.
- b. Pursuant to Regulation 401 KAR 63:010, Section 3 (1), no person shall cause, suffer, or allow any material to be handled, processed, transported, or stored; a building or its appurtenances to be constructed, altered, repaired, or demolished, or a road to be used without taking reasonable precaution to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not be limited to the following:
  - 1) Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
  - 2) Application and maintenance of asphalt, oil, water, or suitable chemicals on roads, materials stockpiles, and other surfaces which can create airborne dusts;
  - 3) Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling. Adequate containment methods shall be employed during sandblasting or other similar operations.
  - 4) Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;
  - 5) The maintenance of paved roadways in a clean condition;
  - 6) The prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water.

Permit Number: <u>S-08-106</u> Page: <u>14</u> of <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

### 2. <u>Emission Limitations</u>: (Continued)

- c. Pursuant to Regulation 401 KAR 63:010, Section 3 (2), no person shall cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate.
- d. Pursuant to Regulation 401 KAR 63:010, Section 3 (3), when dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance or to violate any administrative regulation, the Secretary may order that the building or equipment in which processing, handling and storage are done be tightly closed and ventilated in such a way that all air and gases and air or air-borne material leaving the building or equipment are treated by removal or destruction of air contaminants before discharge to the open air.
- e. Pursuant to Regulation 401 KAR 63:010, Section 4, Additional Requirements, in addition to the requirements of Section 3 of this regulation, the following shall apply:
  - 1) Pursuant to Regulation 401 KAR 63:010, Section 4 (1), open bodied trucks, operating outside company property, transporting materials likely to become airborne shall be covered at all times when in motion.
  - 2) Pursuant to Regulation 401 KAR 63:010, Section 4 (4), no one shall allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway.

#### Compliance Demonstration Method:

- a. See Section C, General Condition 6.a.
- b. As required by Section 1b of the Cabinet Provisions and Procedures for Issuing State-Origin Permits, compliance with annual emissions and processing limitations shall be based on emissions and processing rates for any twelve (12) consecutive months.

#### 3. <u>Testing Requirements</u>:

N/A

#### 4. Monitoring Requirements:

See Section C, General Condition 6.a.

#### 5. Recordkeeping Requirements:

See Section C, General Conditions 2.a., 2.b., and 6.a.

Permit Number: <u>S-08-106</u> Page: <u>15</u> of <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

# 6. Reporting Requirements:

See Section C, General Conditions 3.a., 3.b., 3.c., and 6.b.

Permit Number: S-08-106 **Page:** 16 of 29

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE **REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

#### **STORAGE TANKS:**

07	<b>(T61)</b>	Denatured Ethanol (95% Ethanol, 5% Gasoline)	
		(Tank Capacity - 650,000 gallon)	
		Constructed: 2003	

(T64)**Denaturant (100% Gasoline)** (Tank Capacity - 39,000 gallon)

Constructed: 2003

08 (T62)200 Proof Ethanol (100% Ethanol) (Tank Capacity - 39,000 gallon)

Constructed: 2003

(T63)200 Proof Ethanol (100% Ethanol) (Tank Capacity - 39,000 gallon)

Constructed: 2003

(T66)190 Proof Ethanol (100% Ethanol) (Tank Capacity - 39,000 gallon)

Constructed: 2003

(T67)**Corrision Inhibitor** 

(Tank Capacity - 1470 gallon)

Constructed: 2003

12 (T65)**Denatured Ethanol (95% Ethanol, 5% Gasoline)** 

(Tank Capacity – 1,000,000 gallon)

Constructed: 2005

Control:

#### **APPLICABLE REGULATIONS:**

State Regulation 401 KAR 60:005, Standards of performance for new stationary sources, which incorporates by reference 40 CFR 60.110b (40 CFR 60, Subpart Kb), applies to each of the affected facilities listed above.

State Regulation 401 KAR 60:005, Standards of performance for new stationary sources, which incorporates by reference 40 CFR 60.60.480 (40 CFR 60, Subpart VV), applies to each of the affected facilities listed above storing ethanol.

Permit Number: <u>S-08-106</u> Page: <u>17</u> of <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

#### 1. Operating Limitations:

The tanks shall be operated in accordance with 40 CFR 60.112b, Standard for volatile organic compounds (VOC), referenced in the attached table (Attachment A) under "VOC Operating/Emission Standards".

### Compliance Demonstration Method:

Compliance shall be demonstrated by monitoring, recordkeeping, and testing requirements as listed below, referenced in the attached table (Attachment A) under "VOC Operating/Emission Standards", "Monitoring and Recordkeeping Requirements", "Reporting Requirements" and "Testing Requirements".

### 2. <u>Emission Limitations</u>:

The permittee shall incorporate the following elements in the required leak detection and repair (LDAR) program. If any of the equipment qualifies for the specific exemptions available in 40 CFR 60, Subpart VV, the permittee shall maintain records of the reason(s) why the equipment is exempt.

- a. Pumps in light liquid service [40 CFR 60.482-2]:
  - 1) 40 CFR 60.482-1 Implementation and compliance provisions
  - 2) 40 CFR 60.482-2(a) Monitoring requirements, frequency of monitoring
  - 3) 40 CFR 60.482-2(b) Leak detection levels
  - 4) 40 CFR 60.482-2(c) Repair time frames
  - 5) 40 CFR 60.482-2(d)-(f) Exemptions for specific types of pumps
- b. Pressure relief devices in gas/vapor service [40 CFR 60.482-4]:
  - 1) 40 CFR 60.482-4(a) Operational requirements
  - 2) 40 CFR 60.482-4(b) Pressure relief procedures
  - 3) 40 CFR 60.482-4(c) Exemptions for specific types of pressure relief devises
- c. Open-ended valves or lines [40 CFR 60.482-6]:
  - 40 CR 60.482-6(a)-(c) Operational requirements
- d. Valves in gas/vapor service and in light liquid service [40 CFR 60.482-7]
  - 1) 40 CFR 60.482-7(a) Operational requirements
  - 2) 40 CFR 60.482-7(b)-(c) Monitoring requirements and intervals
  - 3) 40 CFR 60.482-7(d) Leak repair time frames
  - 4) 40 CFR 60.482-7(e) First attempt repair procedures
  - 5) 40 CFR 60.482-7(f)-(h) Exemptions for no detectable emissions, unsafe-to-monitor and difficult-to-monitor valves

Permit Number: <u>S-08-106</u> Page: <u>18</u> of <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

# 2. <u>Emission Limitations</u>: (Continued)

- e. Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors [40 CFR 60.482-8]:
  - 1) 40 CFR 60.482-8(a) Operational requirements
  - 2) 40 CFR 60.482-8(b)-(c) Leak detection and repair time frames
  - 3) 40 CFR 60.482-8(d) First attempt repair procedures
- f. Delay of repair [40 CFR 60.482-9]:

40 CFR 60.482-9 Allowances for delay of repair

- g. Closed vent systems and control devices [40 CFR 60.482-10]:
  - 1) 40 CFR 60.482-10(a) Applicability requirements
  - 2) 40 CFR 60.482-10(b) Vapor recovery system efficiency
  - 3) 40 CFR 60.482-10(e) Monitoring of control devices
  - 4) 40 CFR 60.482-10(f) Inspection of closed vent system
  - 5) 40 CFR 60.482-10(g) Leak detection and repair
  - 6) 40 CFR 60.482-10(h) Delay of repair
  - 7) 40 CFR 60.482-10(i)-(k) Exemptions for certain types of vapor collection systems or closed vent systems
  - 8) 40 CFR 60.482-10(1) Recordkeeping requirements
  - 9) 40 CFR 60.482-10(m) Requirement to operate the control device

#### Compliance Demonstration Method:

- a. For compliance with visual inspections for the tanks, Method 21 shall be used to determine the presence of leaking sources. Also see 40 CFR 60.485(b).
- b. A copy of the leak detection and repair (LDAR) program meeting the criteria listed above shall be kept available at a readily accessible location for inspection.

#### 3. Testing Requirements:

- a. Testing shall be performed in accordance with 40 CFR 60.113b, Testing and procedures, referenced in the attached table (Attachment A) under "Testing Requirements".
- b. The permittee shall comply with the following test methods and calibration procedures requirements [Subpart VV 40 CFR 60.485]:
  - 1) 40 CFR 60.485(a)-(c) Reference methods and compliance with standards
  - 2) 40 CFR 60.485(d) Exemption from testing procedures
  - 3) 40 CFR 60.485(e) Equipment in light liquid service applicability

Permit Number: S-08-106 **Page:** 19 **of** 29

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

#### 4. **Monitoring Requirements:**

- Monitoring shall be performed in accordance with 40 CFR 60.113b, Testing and a. procedures, 40 CFR 60.115b, Reporting and Recordkeeping requirements, and 40 CFR 60.116b, Monitoring of operations, referenced in the attached table (Attachment A).
- b. See 2, Emission limitations above.
- See Section C, General Condition 6.a. c.

#### 5. **Recordkeeping Requirements:**

- Recordkeeping shall be performed in accordance with 40 CFR 60.113b, Testing and a. procedures, 40 CFR 60.115b, Reporting and Recordkeeping requirements, and 40 CFR 60.116b, Monitoring of operations, referenced in the attached table (Attachment A).
- Subpart VV requirements [40 CFR 60.486]: b.
  - 1) All records required by 40 CFR 60.486 shall be maintained in a manner that can be readily accessed at the plant site.
  - 2) When a leak is identified, the procedures in 40 C FR 60.486(b) shall be followed and the information shall be recorded in a log as described in 40 CFR 60.486(c).
  - 3) The information on design requirements of closed vent system and control device shall be kept as detailed in 40 CFR 60.486(d).

4)	40 CFR 60.486(e)	Information of all equipment subject to 40 CFR 60.482-1 to 482-10
5)	40 CFR 60.486(f)	Information of all valves subject to 40 CFR 60.482-7(g)
3)	40 CFK 00.480(1)	and (h)
6)	40 CFR 60.486(g)	Information of all valves complying with 40 CFR 60.483-
		2
7)	40 CFR 60.486(h)	Design criteria and changes to design criteria
8)	40 CFR 60.486(i)	Exemptions

- 9) Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.
- See 2. Emission limitations above. c.
- d. See Section C, General Conditions 2.a., 2.b., and 6.a.

#### **Reporting Requirements:** 6.

Reporting shall be performed in accordance with 40 CFR 60.113b, Testing and a. procedures, 40 CFR 60.115b, Reporting and Recordkeeping requirements, and 40 CFR 60.116b, Monitoring of operations, referenced in the attached table (Attachment A).

Permit Number: <u>S-08-106</u> Page: <u>20</u> of <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

# **6.** Reporting Requirements: (Continued)

b. Subpart VV requirements [40 CFR 60.487]:

The initial semi-annual report as required by this permit shall include:

- 1) The list of all the equipment (pipe line components, etc) subject to Subpart VV [40 CFR 60.487(b)].
- 2) The information on leaks detected, repaired, and not repaired [40 CFR 60.487(c)].
- c. See Section C, General Conditions 3.a., 3.b., 3.c., and 6.b.

**Permit Number:** <u>S-08-106</u> **Page:** <u>21</u> **of** <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

#### **Biomethanator Operation:**

09 (-) Biomethanator Flare

**Methane–Fired (3.2 mmBTU/hour)** 

Constructed: 2003

#### **Truck Fuel Loadout:**

10 (P50) Truck Fuel Loadout

Constructed: 2003

Control: Loadout Flare

(-) Truck Loadout Flare

Natural Gas-Fired (3.2 mmBTU/hour)

Constructed: 2005

(P50) Railcar Fuel Loadout

Constructed: 2003

#### **APPLICABLE REGULATIONS:**

State Regulation 401 KAR 63:015, Flares, applies to the Biomethanator and Truck Loadout Flares listed above.

#### 1. Operating Limitations:

N/A

#### 2. Emission Limitations:

Pursuant to State Regulation 63:015, Section 3, the opacity of visible emissions from the flares listed above shall not exceed twenty percent (20%) for more than three (3) minutes in any one (1) day.

#### Compliance Demonstration Method:

Compliance with the opacity limits shall be demonstrated by performing the monitoring and recordkeeping requirements listed under Conditions **4. Monitoring Requirements** and **5. Recordkeeping Requirements** during all periods of operation.

#### 3. <u>Testing Requirements</u>:

N/A

Permit Number: <u>S-08-106</u> Page: <u>22</u> of <u>29</u>

# SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

### 4. **Monitoring Requirements:**

- a. For each episode of methane gas flow to the flare, the permittee shall survey the flare and maintain a log noting the following information once during the course of the episode:
  - 1) Whether any air emissions were visible from the flare;
  - 2) Whether such visible emissions were normal for the flare.
  - 3) If no visible emissions are observed then no further observations are required. If visible emissions are observed during a methane gas flow episode, the permittee shall perform one of the following once during the course of the episode:
    - a) The permittee shall perform a Method 9 reading for the emission point of concern. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification; or
    - b) The permittee shall observe and record in the daily log the following information:
      - a) The color of the emissions;
      - b) Whether the emissions were light or heavy;
      - c) The total duration of the visible emission incident;
      - d) The cause of the abnormal emissions; and
      - e) Any corrective actions taken.
  - b. See Section C, General Condition 6.a.

#### 5. Recordkeeping Requirements:

- a. The permittee shall keep a log of the visible emissions readings for each episode of methane gas flow to the flare. See Condition 4. a. 2) and 3) above.
- b. See Section C, General Conditions 2.a., 2.b., and 6.a.

#### 6. Reporting Requirements:

- a. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days after completion of the fieldwork.
- b. See Section C, General Conditions 3.a., 3.b., 3.c., and 6.b.

**Permit Number:** <u>S-08-106</u> **Page:** <u>23</u> **of** <u>29</u>

#### **SECTION C - GENERAL CONDITIONS**

### 1. Administrative Requirements

a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of State Regulation 401 KAR 52:040, Section 3(1)(b) and is grounds for enforcement action including but not limited to the termination, revocation and reissuance, or revision of this permit.

- b. This permit shall remain in effect for a fixed term of ten (10) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division. [401 KAR 52:040, Section 15]
- c. Any condition or portion of this permit, which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit. [Section 1a, 11 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]
- d. Pursuant to materials incorporated by reference by 401 KAR 52:040, this permit may be revised, revoked, reopened, reissued, or terminated for cause. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance shall not stay any permit condition. [Section 1a, 4, 5, of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]
- e. This permit does not convey property rights or exclusive privileges. [Section 1a, 8 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- f. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance. [401 KAR 52:040 Section 11(3)]
- g. This permit shall be subject to suspension at any time the permittee fails to pay all fees within 90 days after notification as specified in State Regulation 401 KAR 50:038, Air emissions fee. The permittee shall submit an annual emissions certification pursuant to 401 KAR 52:040, Section 20.
- h. All permits previously issued to this source, at this location, are hereby null and void.

**Permit Number:** <u>S-08-106</u> **Page:** <u>24</u> **of** <u>29</u>

# **SECTION C - GENERAL CONDITIONS (CONTINUED)**

### 2. Recordkeeping Requirements

a. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of at least five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality. [401 KAR 52:040 Section 3(1)(f) and Section 1b, IV. 2) of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]

b. The permittee shall perform compliance certification and recordkeeping sufficient to assure compliance with the terms and conditions of the permit. Documents, including reports, shall be certified by a responsible official pursuant to State Regulation 401 KAR 52:040, Section 21.

### 3. Reporting Requirements

- a. 1) In accordance with the provisions of State Regulation 401 KAR 50:055, Section 1, the permittee shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
  - a) When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
  - b) When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall cause written notice upon request.
  - 2) The permittee shall promptly report deviations from permit requirements including those attributed to upset conditions [other than emission exceedances covered by Reporting Requirement Condition 1 a) above], the probable cause of the deviation, and corrective or preventive measures taken; to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report. [Section 1b, V. 3) of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]
- b. The permittee shall furnish information requested by the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or compliance with the permit. [Section 1a, 6 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]

**Permit Number:** <u>S-08-106</u> **Page:** <u>25</u> **of** <u>29</u>

# **SECTION C - GENERAL CONDITIONS (CONTINUED)**

### 3. Reporting Requirements (Continued)

c. Summary reports of monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation. The summary reports are due January 30th and July 30th of each year. All deviations from permit requirements shall be clearly identified in the reports. All reports shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

### 4. Inspections

In accordance with the requirements of State Regulation 401 KAR 52:040, Section 3(1)(f) the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times. Reasonable times are defined as during all hours of operation, during normal office hours, or during an emergency.

- a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation.
- b. To access and copy any records required by the permit.
- c. Inspect any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit.
- d. Sample or monitor substances or parameters to assure compliance with the permit or any applicable requirements.

### 5. Emergencies/Enforcement Provisions

- a. The permittee shall not use as defense in an enforcement action, the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance. [Section 1a, 3 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23]
- b. An emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
  - 1) An emergency occurred and the permittee can identify the cause of the emergency;
  - 2) The permitted facility was at the time being properly operated;
  - 3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit;

Permit Number: <u>S-08-106</u> Page: <u>26</u> of <u>29</u>

# **SECTION C - GENERAL CONDITIONS (CONTINUED)**

#### 5. Emergencies/Enforcement Provisions (Continued)

b. 4) The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two working days after the time when emission limitations were exceeded due to the emergency and included a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.

- c. Emergency provisions listed in General Condition 5.b are in addition to any emergency or upset provision contained in an applicable requirement. [401 KAR 52:040, Section 22(1)]
- d. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [401 KAR 52:040, Section 22(2)]

#### 6. Compliance

- a. Periodic testing or instrumental or non-instrumental monitoring, which may consist of record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstration of continuing compliance with the conditions of this permit. For the purpose of demonstration of continuing compliance, the following guidelines shall be followed:
  - 1) Pursuant to State Regulation 401 KAR 50:055, General compliance requirements, Section 2(5), all air pollution control equipment and all pollution control measures proposed by the application in response to which this permit is issued shall be in place, properly maintained, and in operation at any time an affected facility for which the equipment and measures are designed is operated, except as provided by State Regulation 401 KAR 50:055, Section 1.
  - 2) All the air pollution control systems shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers. A log shall be kept of all routine and non routine maintenance performed on each control device. Daily observations are required during daylight hours of all operations, control equipment and any visible emissions to determine whether conditions appear to be either normal or abnormal. If the operations, controls and/or emissions appear abnormal, the permittee must then comply with the requirements of Section C General Conditions, 3.a.2), of this permit.
  - 3) A log of the monthly production rates shall be kept available at the facility. Compliance with the emission limits may be demonstrated by computer program (spread sheets), calculations or performance tests as may be specified by the Division.
- b. Pursuant to 401 KAR 52:040, Section 19, the permittee shall certify compliance with the terms and conditions contained in this permit by January 30th of each year, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an approved alternative) to the Regional Office listed on the front of this permit in accordance with the following requirements:
  - 1) Identification of the term or condition;

Permit Number: <u>S-08-106</u> Page: <u>27</u> of <u>29</u>

### **SECTION C - GENERAL CONDITIONS (CONTINUED)**

### **6.** Compliance (Continued)

- b. 2) Compliance status of each term or condition of the permit;
  - 3) Whether compliance was continuous or intermittent;
  - 4) The method used for determining the compliance status for the source, currently and over the reporting period; and
  - 5) For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
  - 6) The certification shall be postmarked by January 30th of each year. Annual compliance certifications should be mailed to the following addresses:

Division for Air Quality Paducah Regional Office 4500 Clarks River Road Paducah, KY 42003-0823 Division for Air Quality Central Files 200 Fair Oaks Lane, 1<sup>st</sup> Floor Frankfort, KY 40601

- c. Permit Shield A permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with all applicable requirements for:
  - 1) Applicable requirements included and specifically identified in the permit; or
  - 2) Non-applicable requirements expressly identified in this permit.

# 7. <u>Construction Requirements:</u>

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, emission points 05 (C10) and 13 (P10) in accordance with the terms and conditions of this permit.

- a. Pursuant to 401 KAR 52:040, Section 12(3), unless construction is commenced on or before 18 months after the date of issuance of this permit, or if construction is commenced and then stopped for any consecutive period of 18 months or more, or is not completed within a reasonable timeframe, then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon a written request, the Cabinet may extend these time periods if the source shows good cause.
- b. Pursuant to 401 KAR 52:040, Section 12(4)(a) and 401 KAR 59:005, General provisions, Section 3(1), within 30 days following construction commencement, within 15 days following start-up and attainment of maximum production rate, or within 15 days following the issuance date of this permit, whichever is later, the owner and/or operator of the affected facilities specified on this permit shall furnish to the Regional Office listed on the front of this permit, with a copy to the Division's Frankfort Central Office, the following:

Permit Number: <u>S-08-106</u> Page: <u>28</u> of <u>29</u>

### **SECTION C - GENERAL CONDITIONS (CONTINUED)**

### 7. <u>Construction Requirements</u>: (Continued)

- b 1) Date when construction commenced.
  - 2) Start-up date of each of the affected facilities listed on this permit.
  - 3) Date when maximum production rate was achieved.
- c. 1) Pursuant to 401 KAR 59:005, General provisions, Section 2(1), this permit shall allow operation for performance testing of the affected facilities listed herein. However, within 60 days after the issuance date of this permit or the date of achieving the maximum production rate at which the affected facilities will be operated, whichever is later, but no later than 180 days after initial start-up of such facilities, or the issuance date of this permit, whichever is later, the owner or operator shall conduct performance tests on the thermal oxidizer, emission point 05 (C10) and DDGS Dryer B, emission point 13 (P10); and furnish the Division's Frankfort office a written report of the results of such performance tests.
  - 2) Pursuant to 401 KAR 50:045 Section 5 in order to demonstrate that a source is capable of complying with a standard at all times, a performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive this requirement on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.
- d. Operation of the affected facilities authorized by this permit shall not commence until compliance with applicable standards specified herein has been demonstrated in accordance with the requirements of 401 KAR 52:040, Section 12(4)(b). Until compliance is demonstrated, the source may only operate for the purpose of demonstrating compliance.

Permit Number: <u>S-08-106</u> Page: <u>29</u> of <u>29</u>

#### **SECTION D - INSIGNIFICANT ACTIVITIES**

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:040, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

	Description	Generally Applicable Regulation
1.	Biomethanator	N/A
2.	8 mmBTU/hr Natural-Gas Fired Regenerative Thermal Oxidizer	N/A